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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,256	07/26/2006	Ryoichi Nakashima	294085US8PCT	4792
22850 7590 12/01/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WILSON, BRIAN P	
			ART UNIT	PAPER NUMBER
			2612	
			NOTIFICATION DATE	DELIVERY MODE
			12/01/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/587,256	<b>Applicant(s)</b> NAKASHIMA ET AL.	
	<b>Examiner</b> Brian Wilson	<b>Art Unit</b> 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10-26-2006, 3-25-2008, 11-11-2008</u> .                       | 6) <input type="checkbox"/> Other: _____                          |



**DETAILED ACTION**

Claims 1-7 are pending

***Drawings***

1. The drawings are objected to because *POWER ON* time line in Figure 4 is continuous. The *POWER ON* time line should be separate for each Figure, and not indicated as a continuous line. *POWER ON* labels should be added to indicate the beginning of each process in Figures 4B and 4C. This will prevent any confusion for those who can't distinguish between the distinct separate processes. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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2. Figures 4B and 4C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 and 7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 9 and 14 of copending Application No.

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12/037, 714 in view of Ito (U.S. Patent 5,825,155). Claims 1 and 7 features a *display* that claims 1, 5, 9 and 14 of the copending application lack. Claims 1 and 7 have the same system components, similar authentication and residual quantity processing, and feature the same communication between the battery pack and equipment body as those claimed in 1, 5, 9 and 14 of the copending application. Ito teaches a *display* with authentication and residual quantity processing that has communication between a battery pack and equipment body (**Col. 73, line 23**). This combination is obvious because by including a display, the user will be able to determine the charge state of the battery pack at the time of powering of the equipment body.

This is a provisional obviousness-type double patenting rejection.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (U.S. Patent 5,825,155) in view of Barkat (U.S. Patent 5,717,307).

Regarding claims 1 and 7, each requires similar limitations therefore similar rejections and citations are applied. Ito teaches

- a battery residual quantity display method (**Col. 73, line 22; note, in-charge state**)

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- electronic equipment (**Col. 73, line 19; note, charger**)
- comprising a microcomputer (**Col. 73, lines 19-20; note, unit**)
- a battery pack (**Col. 73, line 20**)
- detachably loaded at the equipment body (**Col. 73, line 22; note, set in a charge section**)
- a microcomputer (**Col. 73, lines 19-20; note, microprocessor in battery pack**)
- having communication function (**Col. 73, line 19; note, communication**)
- the battery pack being charged by the equipment body (**Col. 73, line 18**)
- when the battery pack is connected (**Col. 73, line 22; note, set in charge section**)
- the equipment body first acquires information for battery residual quantity display , to perform battery residual quantity display (**Col. 73, lines 22-23; note, in-charge state is displayed before a charge operation**)
- the microcomputer of the equipment body side serves to then acquire information for authentication processing (**Col. 73, lines 53-54; note, information**)
- perform authentication processing to judge on the basis of the acquired information as to whether or not the battery pack connected to the equipment body is genuine battery pack (**Col. 73, lines 58-59; note, determines if battery can be charged**)
- the equipment body side serves to update, after the authentication processing, the content of battery residual quantity display (**Col. 74, lines 30-31; note, after authentication the residual information is displayed/updated**)

However, Ito does not teach

- *the battery pack serving to supply power to the equipment body*
- *wherein when power is turned ON*

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Barkat teaches

- *the battery pack serving to supply power to the equipment body (Claim 1)*
- *wherein when power is turned ON (Fig. 8, Step 800)*

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Ito's residual display method with Barkat's authentication method for equipment/chargers. Ito and Barkat's methods are similar and both of the methods involve authentication and residual displays. This combination is desirable because the charge display immediately lets the user confirm the charge state of the battery once it is set in a piece of equipment or once the equipment is powered on.

Regarding claim 3, Ito in view of Barkat teach the battery residual quantity display method according to claim 1. Ito further teaches common information (**Col. 74, lines 26-28; note, data**), and the equipment body side performs authentication processing to judge the battery pack as to whether or not it is a genuine battery pack. (**Col. 74, lines 26-28; note, determines if battery is chargeable; Col. 74, lines 41-43**)

Regarding claim 4, Ito in view of Barkat teach the battery residual quantity display method according to claim 1. Ito further teaches

- wherein in the case the equipment body side judges that the battery pack loaded at the equipment body is not the genuine battery pack by the authentication processing, it displays a notification thereafter to disable the charging unit. (**Col. 74, lines 40-43**)

However, Ito does not teach



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- thereafter to *cut off power supply of the equipment body*

Barkat teaches

- thereafter to *cut off power supply of the equipment body* (**Fig. 8, Step 840**)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Ito's display method with Barkat's power off step, because this will improve the safety, operability, and protect the equipment from being damaged from a counterfeit battery.

Regarding claim 5, Ito in view of Barkat teach the battery residual quantity display method according to claim 1. Ito further teaches in performing the authentication processing (**Col. 73, 31-40**), the microcomputer of the equipment body side alternately (**Col. 73, lines 36-39; note, equipment can receive battery type then charge state, or charge state then battery type**) receives information for the authentication processing and information for the battery residual quantity display from the microcomputer of the battery pack side loaded at the equipment body to update, after the authentication processing, the content of battery residual quantity display. (**Col. 74, lines 29-33; note, after authentication the display is updated showing charge state**)

Regarding claim 6, Ito in view of Barkat teach the battery residual quantity display method according to claim 1. Ito further teaches

- the equipment body side stores (**Col. 62, lines 11-18; note, that charger compares stores/updated information with previous information**), to use the result of the authentication processing in authentication processing at the second time (**Col. 62, lines 11-18; note, that charger uses information to detect presence/absence of exchange of the battery pack**) when battery pack is charged and times subsequent thereto.

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However, Ito does not teach

- when *power is turned ON* and times subsequent thereto.

Barkat teaches

- *power is turned ON (Fig. 8, Step 800)*

It would have been obvious to one of ordinary skill in the art at the time of the invention to replace Ito's identification steps with Barkat's power up step, because using stored/updated identification information when a piece of equipment is powered ON saves time when the battery hasn't been disconnected from the equipment or charger, thus eliminating wasted time authenticating an already authenticated battery.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (U.S. Patent 5,825,155) in view of Barkat (U.S. Patent 5,717,307) as applied to claim 1 above, and further in view of Tsuchiya (U.S. Pub 2004/0212349).

Regarding claim 2, Ito in view of Barkat teach the battery residual quantity display method according to claim 1. Ito in view of Barkat teach

- and the microcomputer of the equipment body side serves to acquire, by serial communication, current quantity of the battery usable at present as information for the battery residual quantity display from the microcomputer of the battery pack side loaded at the equipment body to calculate remaining usable time of the battery on the basis of the acquired current quantity of the battery usable at present and current consumption value

of the equipment to perform battery residual quantity display. (**Col. 73, lines 35-40 & Col. 73, line 49-50**)

However, Ito in view of Barkat do not teach

- *wherein the microcomputer of the battery pack side detects a current flowing out from the battery pack as information for the battery residual quantity display to integrate current quantities thereof to thereby grasp a current quantity of the battery usable at present*

Tsuchiya teaches

- *wherein the microcomputer of the battery pack side detects a current flowing out from the battery pack as information for the battery residual quantity display to integrate current quantities thereof to thereby grasp a current quantity of the battery usable at present*  
**([0047] note, microcomputer, current detector, data sent to equipment for residual display)**

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Ito and Barkat's system with Tsuchiya's current detection/communication circuit, because this reduces the processing required by the equipment, and makes it harder to produce a counterfeited battery.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wendelrup (U.S. 6,211,644) discloses a method and apparatus for identifying a battery. Fischl (U.S. 2005/0231160) discloses an energy safety notification system for electronic devices.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Wilson whose telephone number is (571)270-5884. The examiner can normally be reached on Monday-Thursday from 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BW/

/Jeff Hofsass/  
Supervisory Patent Examiner, Art Unit 2612